James Burtle

From: James Burtle
Sent: Tuesday, June 01, 2004 2:07 PM
To: 'timvanweelden@alliantenergy.com'
Subject: PBL Interference complaints

Mr. VanWeelden,

The FCC has received a few interference complaints related to Alliant Energy's Broadband Over Power Lines (BPL) experiment. Soon I will forward to you the e-mail complaints that we have received to date. If you have received complaints other than those forwarded, please forward copies to me. My FAX number is (202) 418-1918 for complaints received via mail.

The FCC is interested in what has been done to resolve the interference complaints. Within ten business days, please send me a summary of your interference resolution efforts thus far. I would also like to be kept informed of your interference resolution efforts going forward.

We are sending similar requests to all BPL experimenters if we have received interference complaints about their operation.

If this e-mail should go to someone other than yourselves, please forward it to that person and let me know who that person is.

Sincerely,

Jim Burtle
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission

James Burtle

From: James Burtle
Sent: Tuesday, June 01, 2004 2:14 PM
To: 'timvanweelden@alliantenergy.com'
Subject: FW: Harmful Interference from BPL-2

sent to Tim VanWeelden 6/1/2004

-----Original Message-----
From: Jim Spencer [mailto:jlscr@mchsi.com]
Sent: Thursday, April 22, 2004 10:45 AM
To: Tim VanWeelden
Cc: Riley Hollingsworth; Alan Stillwell; Anh Wride; James Burtle; Ed Hare W1RFI
Subject: Harmful Interference from BPL-2

Resent to correct an email address.

Tim VanWeelden
Alliant Energy
1001 Shaver Rd. NE
Cedar Rapids, IA 52402

Dear Tim:

Thank you for allowing me to participate in your test of the Amperion BPL system in NE Cedar Rapids. My location, station quality and experience as an electrical engineer for over 40 years and Amateur Radio operator for over 50 years has yielded very worthwhile information about the effects of a possible BPL deployment on other services using the High Frequency bands.

Your BPL installation is causing extremely harmful interference to my station on most amateur frequency bands and it makes normal communication impossible. BPL, a Part 15 device as defined in the FCC Regulations, is prohibited from interfering with other services licensed by the FCC. Now that your tests are completed, I ask that you correct the interference immediately or shut down the BPL system per Part 15 of the Regulations.

I started receiving serious levels of interference on March 30 when your BPL equipment was first installed. It has continued 24 hours a day since the 30th except for a few test shut downs. I have confirmed the interfering frequencies with Tom Luecke of Amperion. I've also demonstrated the problem to Alliant employees. Alliant and the Nebraska Center for Excellence in
Electronics visited my station on April to record BPL levels. They were
able to observe the strong levels of interference and to note that when the BPL was shut down, all of this interference disappeared.

The Amperion representative has provided me with a listing of the amateur frequency bands which he had notched when the system was installed. This includes the 20, 17, 15, 12 and 10 meter bands. However, I'm still receiving significant interference in those amateur bands and additionally in the 30 and 40 meter bands. The notching is ineffective in alleviating the harmful interference that I'm experiencing.

I again offer to demonstrate to any in Alliant management, or other Alliant employees, the extreme interference caused by BPL to my licensed Amateur
Radio operation. I've also offered to help run susceptibility tests to
determine what impact operation of a licensed Amateur Radio station might have on a customer using BPL for an Internet connection.

Below, in a standardized format prepared by the American Radio Relay League, is a report on the harmful interference I am receiving . I can supply more details on the interference or actual recordings if that would be helpful.

Sincerely,

James L. Spencer

Report of Harmful Interference from a Broadband Over Power Line Trial

Name of complainant: James L. Spencer

Call sign : W0SR

Station location: 3712 Tanager Dr. NE, Cedar Rapids, Iowa 52402

Telephone: 319-393-7353

Email: jlscr2@yahoo.com

Description of Interference: Extremely strong carriers with some modulation occurring throughout the amateur bands, often occurring less than every 2 KHz. The frequencies shift some with time but are generally on the low end of the 10 meter band, throughout the 12, 15, 17 and 40 meter bands. Interference can on the 20 and 30 meter bands seems to change although at times has been extremely strong.

Description of station: Icom IC-765, Icom IC-735, Kenwood TL-922A Power Amplifier (1000 watts), Alpha 76 PA Power Amplifier (1500 watts)

Receiver(s) affected: IC-765, IC-735

Antenna type: 1. TH7DXX rotary beam; 2. Inverted Vee's for 75 and 40 meters; 3. HF-2V Vertical for 80 and 40 meters; 4. rotary dipole for 30, 17 and 12 meters; 5. Inverted L for 160 meters

Antenna location: Tower is located about 80 feet from street in backyard.

Distance of antenna from own house (feet): 4 feet

Distance of antenna from neighboring houses (feet): approximately 30 feet

Distance of antenna from power distribution line or equipment: Antenna is about 50 feet from distribution line, about 500 feet from nearest BPL unit.

Log of interference

I have picked one typical day for this report although I've recorded information for many days. This interference is on full time as I stated above.

Date : 4-17-04

Time 10:50 to 11:22 AM

The interference consists of carriers spaced approximately every 2 KHz. as noted above.

Frequency: 40 meters (7.0 to 7.3 MHz) Mode: CW/SSB Interfering Signal Strength: S8 to S9

Frequency: 30 meters (10.1 to 10.150 MHz) Mode: CW Interfering Signal Strength: S6 to S8

Frequency: 20 meters (14.0 to 14.350 MHz) Mode: CW/SSB Interfering Signal Strength: S5 to S7

Frequency: 17 meters (18.068 to 18.168 MHz) Mode: CW/SSB Interfering Signal Strength: S9

Frequency: 15 meters (21.0 to 21.450 MHz) Mode: CW/SSB Interfering signal Strength: S8 to S9

Frequency: 12 meters (24.890 to 24.990 MHz) Mode: CW/SSB Interfering Signal Strength: S7 to S9

Frequncény: 10 meters (28.0 to 28.4 MHz) Mode: CW/SSB Interfering Signal Strength: S7 to S8

James Burtle

From: Steve Martin
Sent: Friday, June 04, 2004 9:47 AM
To: Anh Wride; James Burtle
Cc: Bruce Franca; Alan Scrime; Karen Rackley; Geraldine Matise; Bruce Romano; William Hurst; Rashmi Doshi
Subject: RE: ATTENTION: ACTION REQUESTED

I think that we should start by asking the guy a few questions by email or phone:
--Are power lines overhead in his neighborhood?
--How far is his antenna from the power lines?
--Did he notice any change in interference levels with the introduction of notching by Amperion?
--Can he tell by tuning across the bands whether the interference source appears to be notched in the bands that Amperion noted? If so, does interference occur throughout the notched band (a problem with notch depth on the BPL system or another source of interference), only near the edges (a problem with notch width or steepness of the skirts), or only outside of the notched bands?

Getting in touch with him ASAP seems like a good idea to me. I'm willing to do so myself by phone or email if someone wants me to.

Steve Martin
Technical Research Branch
FCC Laboratory
*** Non-Public: For Internal Use Only ***

> -----Original Message-----
> **From:** Anh Wride
> **Sent:** Friday, June 04, 2004 9:22 AM
> **To:** James Burtle
> **Cc:** Bruce Franca; Alan Scrime; Karen Rackley; Geraldine Matise; Bruce Romano
> **Subject:** FW: ATTENTION: ACTION REQUESTED
>
> have you talked to this guy?
> -----Original Message-----
> **From:** Bruce Franca
> **Sent:** Friday, June 04, 2004 9:06 AM
> **To:** Anh Wride; Alan Scrime
> **Cc:** Karen Rackley; Geraldine Matise
> **Subject:** RE: ATTENTION: ACTION REQUESTED
>
> Sounds like we should hurry up and talk to this company. If they have notched the frequencies and he is still getting IX sounds like its coming from something else.
> Bruce Franca
> Office of Engineering & Technology
> 418-2470
>
> *****Non-Public: For Official Use Only********
>
> > -----Original Message-----
> > **From:** Anh Wride
> > **Sent:** Friday, June 04, 2004 8:17 AM
> > **To:** Bruce Franca; Alan Scrime

Cc: Karen Rackley; Geraldine Matise
Subject: FW: ATTENTION: ACTION REQUESTED

FYI.
-----Original Message-----
From: Jim Spencer [mailto:jlscr@mchsi.com]
Sent: Friday, June 04, 2004 12:16 AM
To: Riley Hollingsworth; James Burtle; Anh Wride; Alan Stillwell
Cc: Wade Walstrom; Ed Hare W1RFI
Subject: ATTENTION: ACTION REQUESTED

Dear FCC:

The message shown below was sent to you on March 22, 2004 and again on May 17, 2004. I have not received a confirmation from anyone at the FCC. Did you receive it?

Have I sent it to the correct department within the FCC? If not, can you tell me who to contact and how to contact them?

The harmful interference continues 24-hours a day, seven days a week. FCC intervention, in accordance with Part 15, is obviously required. How do I go about getting action to be taken soon? The harmful interference makes communication on most amateur bands impossible, except with the strongest signals.

Your reply will be appreciated.

Sincerely,

James L. Spencer

LETTER SENT MARCH 22, 2004

Tim VanWeelden
Alliant Energy
1001 Shaver Rd. NE
Cedar Rapids, IA 52402

Dear Tim:

Thank you for allowing me to participate in your test of the Amperion BPL system in NE Cedar Rapids. My location, station quality and experience as an electrical engineer for over 40 years and Amateur Radio operator for over 50 years has yielded very worthwhile information about the effects of a possible BPL deployment on other services using the High Frequency bands.

Your BPL installation is causing extremely harmful interference to my

station on most amateur frequency bands and it makes normal communication impossible. BPL, a Part 15 device as defined in the FCC Regulations, is prohibited from interfering with other services licensed by the FCC. Now that your tests are completed, I ask that you correct the interference immediately or shut down the BPL system per Part 15 of the Regulations.

I started receiving serious levels of interference on March 30 when your BPL equipment was first installed. It has continued 24 hours a day since the 30th except for a few test shut downs. I have confirmed the interfering frequencies with Tom Luecke of Amperion. I've also demonstrated the problem to Alliant employees. Alliant and the Nebraska Center for Excellence in Electronics visited my station on April 15 to record BPL levels. They were able to observe the strong levels of interference and to note that when the BPL was shut down, all of this interference disappeared.

The Amperion representative has provided me with a listing of the amateur frequency bands which he had notched when the system was installed. This includes the 20, 17, 15, 12 and 10 meter bands. However, I'm still receiving significant interference in those amateur bands and additionally in the 30 and 40 meter bands. The notching is ineffective in alleviating the harmful interference that I'm experiencing.

I again offer to demonstrate to any in Alliant management, or other Alliant employees, the extreme interference caused by BPL to my licensed Amateur Radio operation. I've also offered to help run susceptibility tests to determine what impact operation of a licensed Amateur Radio station might have on a customer using BPL for an Internet connection.

Below, in a standardized format prepared by the American Radio Relay League, is a report on the harmful interference I am receiving . I can supply more details on the interference or actual recordings if that would be helpful.

Sincerely,

James L. Spencer

Report of Harmful Interference from a Broadband Over Power Line Trial

Name of complainant: James L. Spencer

Call sign : W0SR

Station location: 3712 Tanager Dr. NE, Cedar Rapids, Iowa 52402

Telephone: 319-393-7353

Email: jlscr2@yahoo.com

Description of Interference: Extremely strong carriers with some modulation occurring throughout the amateur bands, often occurring less than every 2 KHz. The frequencies shift some with time but are generally on the low end of the 10 meter band, throughout the 12, 15, 17 and 40 meter bands. Interference can on the 20 and 30 meter bands seems to change although at times has been extremely strong.

Description of station: Icom IC-765, Icom IC-735, Kenwood TL-922A Power Amplifier (1000 watts), Alpha 76 PA Power Amplifier (1500 watts)

Receiver(s) affected: IC-765, IC-735

Antenna type: 1. TH7DXX rotary beam; 2. Inverted Vee's for 75 and 40 meters; 3. HF-2V Vertical for 80 and 40 meters; 4. rotary dipole for 30, 17 and 12 meters; 5. Inverted L for 160 meters

Antenna location: Tower is located about 80 feet from street in backyard.

Distance of antenna from own house (feet): 4 feet

Distance of antenna from neighboring houses (feet): approximately 30 feet

Distance of antenna from power distribution line or equipment: Antenna is about 50 feet from distribution line, about 500 feet from nearest BPL unit.

Log of interference

I have picked one typical day for this report although I've recorded information for many days. This interference is on full time as I stated above.

Date : 4-17-04

Time 10:50 to 11:22 AM

The interference consists of carriers spaced approximately every 2 KHz. as noted above.

Frequency: 40 meters (7.0 to 7.3 MHz) Mode: CW/SSB Interfering Signal Strength: S8 to S9

Frequency: 30 meters (10.1 to 10.150 MHz) Mode: CW Interfering Signal Strength: S6 to S8

Frequency: 20 meters (14.0 to 14.350 MHz) Mode: CW/SSB Interfering Signal Strength: S5 to S7

Frequency: 17 meters (18.068 to 18.168 MHz) Mode: CW/SSB Interfering Signal Strength: S9

Frequency: 15 meters (21.0 to 21.450 MHz) Mode: CW/SSB Interfering signal Strength: S8 to S9

Frequency: 12 meters (24.890 to 24.990 MHz) Mode: CW/SSB Interfering Signal Strength: S7 to S9

Frequency: 10 meters (28.0 to 28.4 MHz) Mode: CW/SSB Interfering Signal Strength: S7 to S8

ALLIANT ENERGY.

Interstate Power and Light Co.
An Alliant Energy Company

Corporate Headquarters
Alliant Tower
200 First Street SE
P.O. Box 351
Cedar Rapids, IA 52406-0351

Office: 1.800.822.4348
www.alliantenergy.com

June 15, 2004

Jim Burtle, Chief
Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Mr. Burtle:

I am writing on behalf of Interstate Power and Light Company – Alliant Energy ("Alliant Energy") in response to your inquiry of June 1, 2004. As I understand, you have requested that Alliant Energy address what has been done by us to resolve interference complaints from several local HAM operators in Cedar Rapids, Iowa. As we discussed in our phone conversation on June 1, I have attached scanned copies of the complaints Alliant Energy has received to date for your reference.

By way of response, I would like to start with a brief history of the Alliant Energy pilot, to discuss our interactions with the HAM community, and then to conclude with where we are today.

Alliant Energy officially began its pilot on April 1, 2004, with the installation of four Amperion overhead units and three underground units along a local street in Cedar Rapids. As you may recall, Amperion equipment is the same type of equipment that has been successfully deployed and extensively tested at Progress Energy's test site in Raleigh, NC.

The street we selected for our pilot is heavily populated with residential customers and has a diverse topography consisting of mature trees and homes. We felt this would be an ideal location to test the limits of the BPL technology—in part due to the location of a fiber backhaul network, 4 and 12.5 kV power lines and the accessibility of underground service.

We soon discovered the presence of HAM operators in the area through contact with our local field office personnel. While we were aware of the previous "issues" that HAM's have had with BPL systems, we felt confident we could use this opportunity to educate both the local HAM operators in our area, as well as ourselves, on exactly what types of issues may arise as a result of this technology.

We soon identified Jim Spencer as the most prominent and vocal fixed HAM operator in the area. We then initiated a dialogue with Mr. Spencer regarding the possibility of his assisting us in determining what interference may occur when the system is activated.

Our first objective once the system was live was to conduct a series of tests by an independent, third-party test lab (see NCEE BPL note) as outlined in the FCC's NPRM as the standard for measuring interference and ensuring Part 15 compliance. These tests were completed the second week of April, and we are currently awaiting the final report.

In addition, we conducted several readings from Mr. Spencer's property, and even used his antennae for some additional tests to gain a better understanding of the interference claims he was making. Following these tests, we began working with Mr. Spencer to identify the magnitude of the interference he was seeing. We also began working with our equipment vendor, Amperion, to utilize their "notching" software to address the areas of concern.

Alliant Energy feels very strongly that we have made significant progress (Alliant Notch Results 5-26-04) toward mitigating all "harmful" interference and will continue to work toward this goal. In fact, with the most recent notching of the 7 and 10 MHZ bands (see attached), we feel (pending verification) we will have successfully mitigated all "harmful" interference within the HAM bands (Spencer scan 6/04/04.pdf), resulting in no discernable BPL signal levels above S0.

One issue that may be of value to the FCC pertains to the sensitivity of Mr. Spencer's equipment. In his complaint to the FCC, he identified the various types of equipment he is using as a HAM operator. It is our belief that the level of sensitivity of his equipment is uncharacteristic of a "typical" HAM operator; therefore making it difficult to address his specific interference issues completely.

As a result, even the most minor signal noise from our system is being magnified to a level that he deems "harmful." Nevertheless, we continue to look for ways to mitigate the interference he and others have brought to our attention and intend to continue to do so for the duration of our pilot and beyond, if necessary.

While we at Alliant Energy remain committed to conducting our test of the BPL technology, we do so with the best intentions to avoid causing any "harmful" interference to the HAM radio operators or any other licensed users of the spectrum. We are currently scheduled to conclude our pilot in September, 2004, and look forward to continuing the dialogue with both the HAM operators and with the FCC, as necessary and appropriate.

It is my understanding that this document, in conjunction with the attached, will serve as our completed response to your request of June 1, 2004. If any additional information is needed in the future, please feel free to contact me at your convenience.

Sincerely,

Daniel Hinz
Product Manager

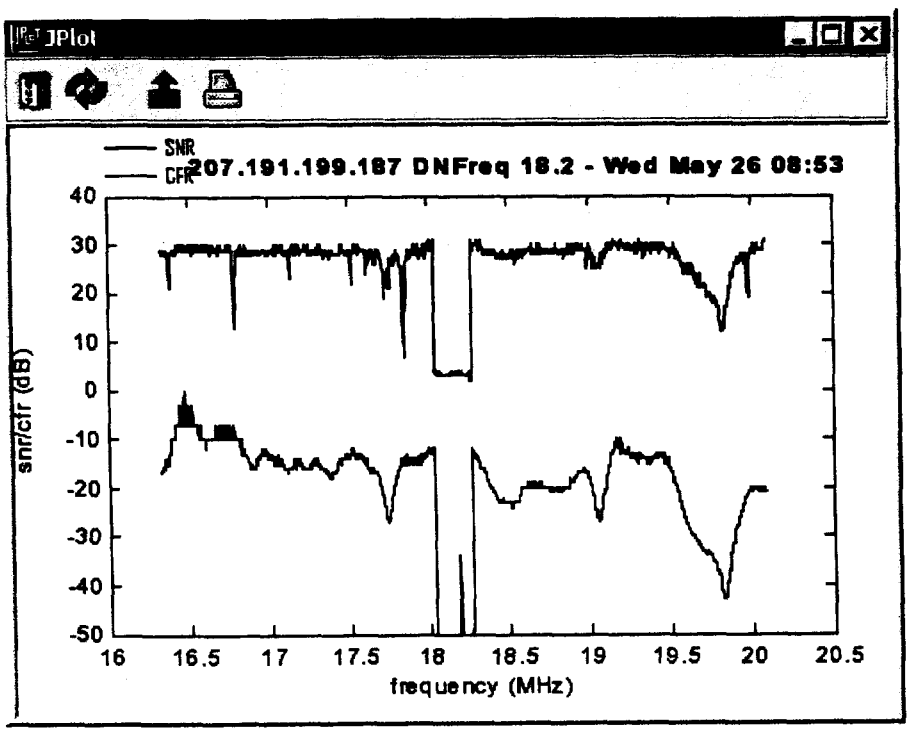
Encl.

Summary

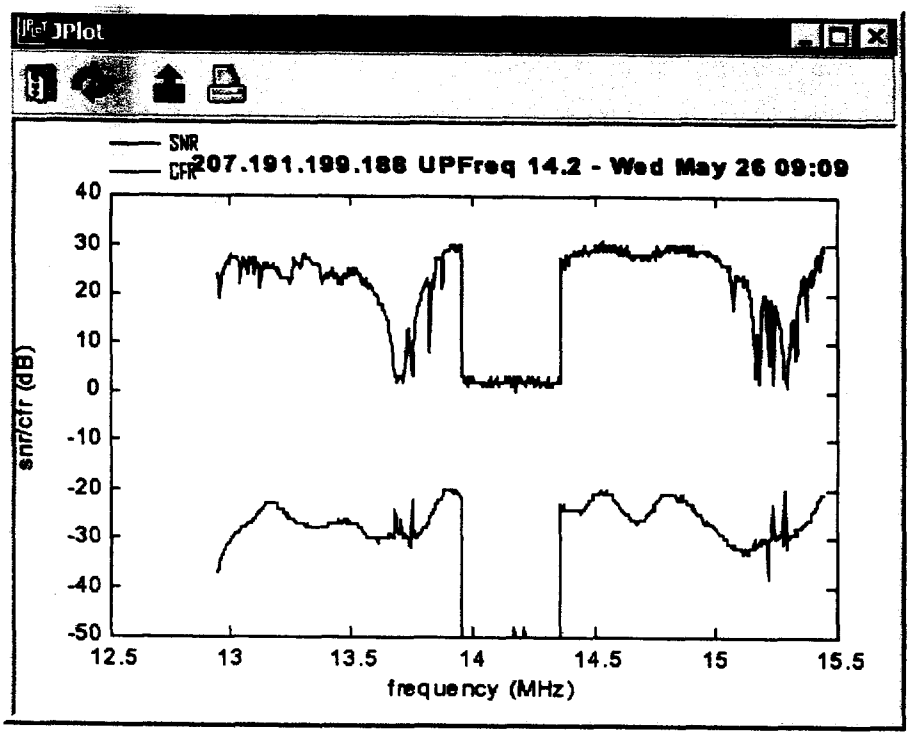
Large notches have now been correctly applied to the two OH links at Alliant and in the right locations. We now know we have to build notches about 100 kHz wider creating a guard band to fully notch a location.

Results

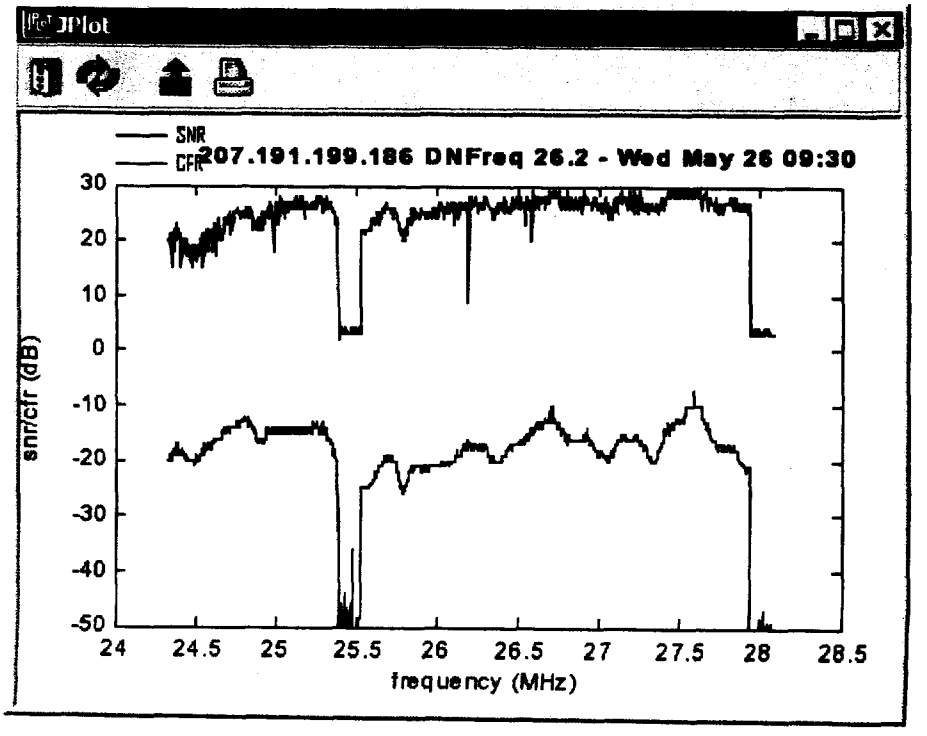
Armed with this new knowledge I created a 239 kHz notch at just above 18 MHz which should have enough guard band for the 18.06 to 18.168 Band 17;



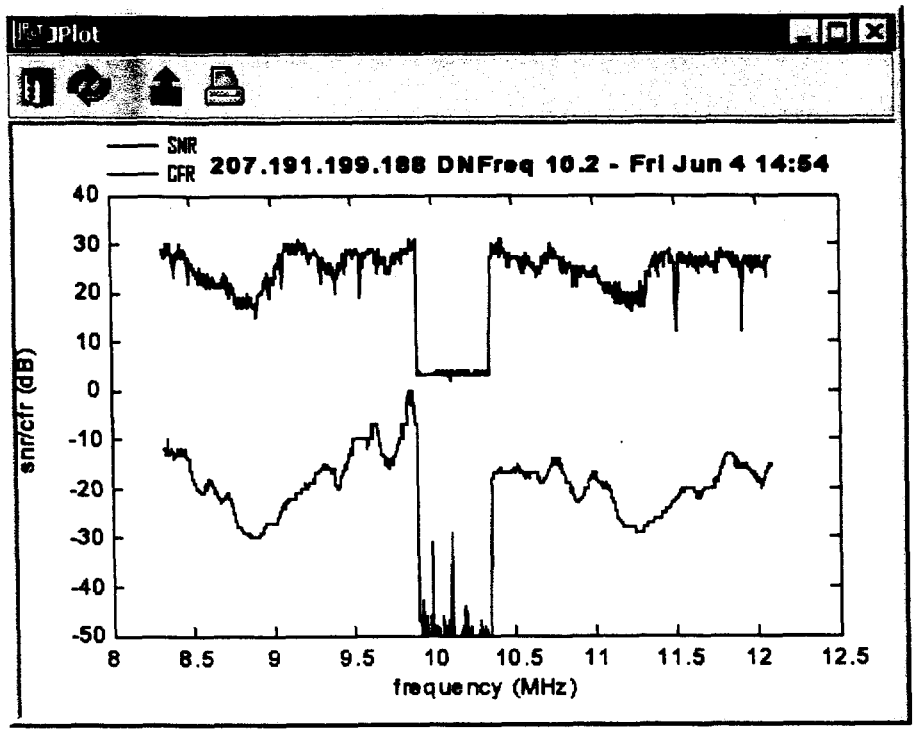
The upstream has a 395 kHz notch starting below 14 MHz which should notch the 14 to 14.35 Band 20.



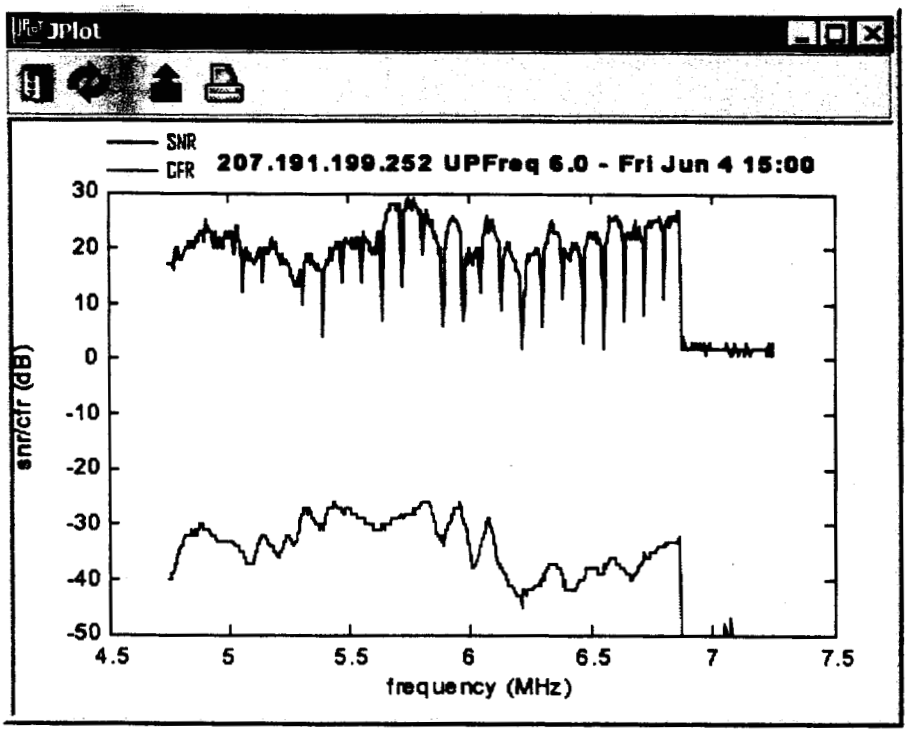
The downstream on the next link now has two 146 kHz notches at the top and just above 25.5 MHz. These will notch the 24.89 to 24.99 Band 12 and 28 to 29.7 Band 10.

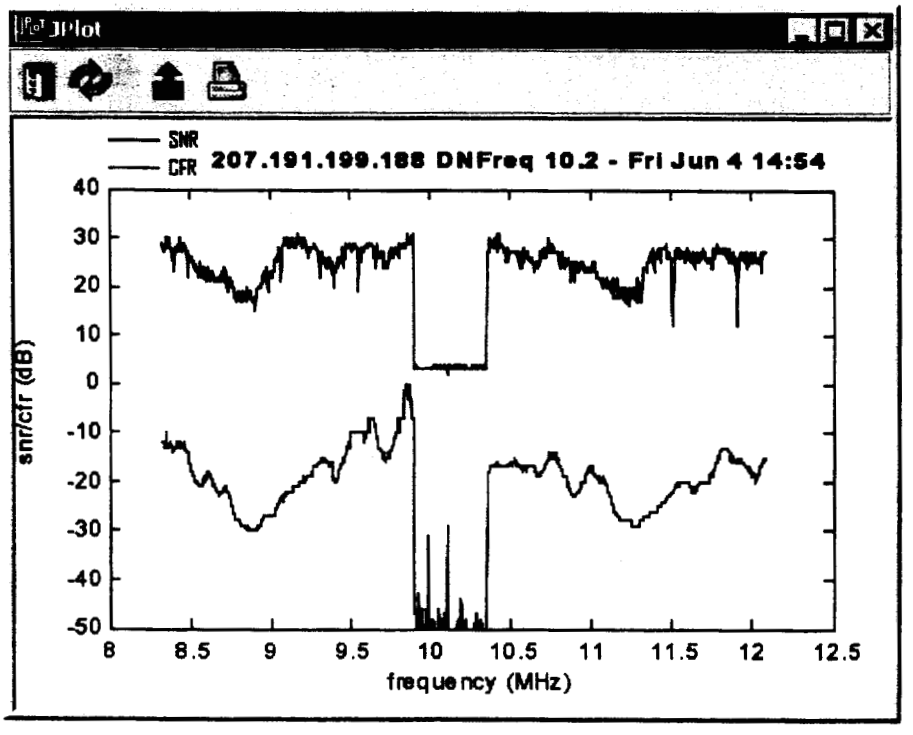


The upstream has a 536 kHz notch at the bottom up to just about 21.5 MHz. This will notch the 21-21.45 Band 15.


JPlot
SNR
CFR
207.191.199.188 DNFreq 10.2 - Fri Jun 4 14:54
snr/cfr (dB)
40
30
20
10
0
-10
-20
-30
-40
-50
8
8.5
9
9.5
10
10.5
11
11.5
12
12.5
frequency (MHz)

7 +10 mhz


JPlot
SNR
CFR
207.191.199.252 UPFreq 6.0 - Fri Jun 4 15:00
snr/cfr (dB)
frequency (MHz)


JPlot
SNR
CFR
207.191.199.188 DNFreq 10.2 - Fri Jun 4 14:54
snr/cfr (dB)
frequency (MHz)

Timothy Van Weelden - BPL Interferrence on amateur radio bands

From: "Rick Sellers"
To: <timvanweelden@alliantenergy.com>
Date: 05/17/2004 3:10 PM
Subject: BPL Interferrence on amateur radio bands

May 17, 2004

Mr. Tim VanWeelden
Alliant Energy
1001 Shaver Rd. NE
Cedar Rapids, IA 52402
E-mail: timvanweelden@alliantenergy.com

Dear Mr. VanWeelden:

I am writing to inform you that your BPL test installation on Glass Rd. NE in Cedar Rapids is causing harmful interference to my licensed Amateur Radio station. This interference is found on 40, 30, 17, 15, 12 and 10 meter amateur bands and makes normal communications on these frequencies difficult. The harmful interference started in late March or early April and continues to this day.

BPL is classified as an intentional emitter in Part 15 of the FCC Regulations and is prohibited from interfering with other FCC licensed services. As the operator of this BPL system it is Alliant Energy's responsibility (as outlined in Part 15 of the FCC Regulations), to eliminate the interference being caused to services licensed by the FCC, including the Amateur Radio service.

Therefore, I am requesting that Alliant Energy, as operator of this BPL system, eliminate the interference caused by the BPL system. If Alliant Energy is not able to eliminate this interference~~at once~~, Alliant Energy should immediately shut down the BPL system.

The harmful interference to my station for a single day is documented in the attached report.

Yours truly,

Richard L. Sellers, WD0HGI
(and licensee of commercial AM Radio Station KMRY)
2900 Glass Road NE
Cedar Rapids, Iowa 52402
Email: r.sellers@kmryradio.com

Cc:

Federal Communications Technology
Office of Engineering and Technology
Attn: Anh Wride
Room 7-A825 Portals II
445 12th Street SW
Washington, DC 20024
Email: awride@fcc.gov

Federal Communications Commission
Attn: Alan R. Stillwell
Room 7-C210
445 12th Street SW

Washington, DC 20024
Email: astillwe@fcc.gov

Federal Communications Commission
Attn: Riley Hollingsworth
1270 Fairfield Road
Gettysburg, PA 17325
Email: rholling@fcc.gov

Federal Communications Commission
James R. Burtle
Chief, Experimental Licensing Branch
Room 7-A267
445 12th Street SW
Washington, DC 20024
E-mail: jburtle@fcc.gov

Ed Hare W1RFI
American Radio Relay League
225 Main Street
Newington, CT 06111
e-mail: ehare@arrl.org

Report of Harmful Interference from a Broadband Over Power Line Trial

Name of complainant: Richard L. Sellers

Call sign: WD0HGI

Station location: 2900 Glass NE, Cedar Rapids, Iowa 52402

Telephone: 319-393-0196

E-mail: r.sellers@KMRYRadio.com

Description of Interference: Closely spaced strong carriers with some modulation. These across wide portions of the affected amateur bands. Some carriers turn on and off.

Description of station: Icom IC-728 Transceiver, Nye-Viking Antenna coupler

Antenna type: All-band center-fed horizontal wire, 165 feet on a side. Approximately 35 feet in the air.

Antenna location: Antenna runs North-South from the front to the back of the lot.

Distance of antenna from own house (feet): The center of the antenna is directly over the house.

Distance of antenna from neighboring houses (feet): approximately 70 feet

Distance of antenna from power distribution line or equipment (feet): Perpendicular to and 65 feet from power line.

Log of interference

Date: 5-8-04

Time 5:00 to 5:50 PM

This interference consists of many closely spaced carriers.

Frequency: 40 meters (7.0 to 7.3 MHz) Mode: CW/SSB
Interfering Signal Strength: S7

Frequency: 30 meters (10.1 to 10.150 MHz) Mode: CW
Interfering Signal Strength: S7

Frequency: 20 meters (14.0 to 14.350 MHz) Mode: CW/SSB
Interfering Signal Strength: Others have reported interference on the 20 meter band. When I took the data on 5-8-04 there was an extremely loud noise which would mask any BPL interference.

Frequency: 17 meters (18.068 to 18.168 MHz) Mode: CW/SSB
Interfering Signal Strength: BPL signals at the S7 noise level

Frequency: 15 meters (21.0 to 21.450 MHz) Mode: CW/SSB
Interfering signal Strength: S6

Frequency: 12 meters (24.890 to 24.990 MHz) Mode: CW/SSB
Interfering Signal Strength: S9

Frequency: 10 meters (28.0 to 28.4 MHz) Mode: CW/SSB
Interfering Signal Strength: S3 to S4

Daniel Hinz - FW: BPL interferrence to amateur operation

From: "James Burtle" <James.Burtle@fcc.gov>
To: <timvanweelden@alliantenergy.com>
Date: 06/01/2004 1:13 PM
Subject: FW: BPL interferrence to amateur operation

-----Original Message-----
From: Rick Sellers [mailto:memorick@kmryradio.com]
Sent: Monday, May 17, 2004 4:16 PM
To: James Burtle
Subject: BPL interferrence to amateur operation

This is a copy of letter sent to Cedar Rapids, Iowa electric utility Alliant Energy.
Thanks for your attention and involvement in this matter.

Rick Sellers

May 10, 2004

Mr. Tim VanWeelden
Alliant Energy
1001 Shaver Rd. NE
Cedar Rapids, IA 52402
E-mail: timvanweelden@alliantenergy.com

Dear Mr. VanWeelden:

I am writing to inform you that your BPL test installation on Glass Rd. NE in Cedar Rapids is causing harmful interference to my licensed Amateur Radio station. This interference is found on 40, 30, 17, 15, 12 and 10 meter amateur bands and makes normal communications on these frequencies difficult. The harmful interference started in late March or early April and continues to this day.

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(and licensee of commercial AM Radio Station KMRY)
2900 Glass Road NE
Cedar Rapids, Iowa 52402
Email: r.sellers@kmryradio.com

Cc:

Federal Communications Technology
Office of Engineering and Technology
Attn: Anh Wride
Room 7-A825 Portals II
445 12th Street SW
Washington, DC 20024
Email: awride@fcc.gov

Federal Communications Commission
Attn: Alan R. Stillwell
Room 7-C210
445 12th Street SW
Washington, DC 20024
Email: astillwe@fcc.gov

Federal Communications Commission
Attn: Riley Hollingsworth
1270 Fairfield Road
Gettysburg, PA 17325
Email: rholling@fcc.gov

Federal Communications Commission
James R. Burtle
Chief, Experimental Licensing Branch
Room 7-A267
445 12th Street SW
Washington, DC 20024
E-mail: jburtle@fcc.gov

Ed Hare W1RFI
American Radio Relay League
225 Main Street
Newington, CT 06111
e-mail: ehare@arrl.org

Report of Harmful Interference from a Broadband Over Power Line Trial

Name of complainant: Richard L. Sellers

Call sign: WD0HGI

Station location: 2900 Glass NE, Cedar Rapids, Iowa 52402

Telephone: 319-393-0196

E-mail: r.sellers@KMRYRadio.com

Description of Interference: Closely spaced strong carriers with some modulation. These across wide portions of the affected amateur bands. Some carriers turn on and off.

Description of station: Icom IC-728 Transceiver, Nye-Viking Antenna coupler

Antenna type: All-band center-fed horizontal wire, 165 feet on a side. Approximately 35 feet in the air.

Antenna location: Antenna runs North-South from the front to the back of the lot.

Distance of antenna from own house (feet): The center of the antenna is directly over the house.

Distance of antenna from neighboring houses (feet): approximately 70 feet

Distance of antenna from power distribution line or equipment (feet): Perpendicular to and 65 feet from power line.

Log of interference

Date: 5-8-04

Time 5:00 to 5:50 PM

This interference consists of many closely spaced carriers.

Frequency: 40 meters (7.0 to 7.3 MHz) Mode: CW/SSB
Interfering Signal Strength: S7

Frequency: 30 meters (10.1 to 10.150 MHz) Mode: CW
Interfering Signal Strength: S7

Frequency: 20 meters (14.0 to 14.350 MHz) Mode: CW/SSB
Interfering Signal Strength: Others have reported interference on the 20 meter band. When I took the data on 5-8-04 there was an extremely loud noise which would mask any BPL interference.

Frequency: 17 meters (18.068 to 18.168 MHz) Mode: CW/SSB
Interfering Signal Strength: BPL signals at the S7 noise level

Frequency: 15 meters (21.0 to 21.450 MHz) Mode: CW/SSB
Interfering signal Strength: S6

Frequency: 12 meters (24.890 to 24.990 MHz) Mode: CW/SSB
Interfering Signal Strength: S9

Frequency: 10 meters (28.0 to 28.4 MHz) Mode: CW/SSB
Interfering Signal Strength: S3 to S4

R. J. Hirvela
3613 Heatheridge Drive NE
Cedar Rapids, Iowa 52402

Mr. Tim VanWeelden
Alliant Energy
1001 Shaver Rd. NE
Cedar Rapids, IA 52402

May 27, 2004

Dear Mr. VanWeelden:

The purpose of this letter is to inform you that your BPL test installation near my home at 3613 Heatheridge Dr NE, on the corner with Glass Road, appears to cause considerable interference on the 15 Meter amateur radio service band.

On May 9, 2004, between 8 Pm and 9 PM, I measured and videotape recorded interference levels of approximately S-7 across the entire band. The interference appeared as a series of tones spaced a few kilohertz apart.

As I hold an FCC Advanced Class Amateur Radio Station License for this location, the BPL system clearly interferes with FCC licensed services. The enclosed report provides additional details.

If you require any additional information please contact me at 319-363-8437.

Thank you.

Sincerely,

Robert Hirvela

Cc:

Federal Communications Technology
Office of Engineering and Technology
Attn: Anh Wride
Room 7-A825 Portals II
445 12th Street SW
Washington, DC 20024

Report of Harmful Interference from a Broadband Over Power Line Trial

Name of Complainant: Robert J. Hirvela

Call Sign: AK0D

Station Location: 3613 Heatheridge Drive NE, Cedar Rapids, IA 52402

Telephone: 319-363-8437

E-Mail: rjhirvela@compuserve.com

Description of Interference: Series of modulated tones spaced a few kilohertz apart

Description of Station: Rockwell-Collins KWM-380 Transceiver

Antenna Type: 40 ft. Multi-band center-fed dipole (Alpha Delta Model DX-EE) Approximately 20 feet in the air

Antenna Location: Antenna runs approximately North-South at rear of house

Distance of antenna from own house (feet): Directly above

Distance of antenna from neighboring house (feet): Approximately 75 feet

Distance of antenna from power distribution line or equipment (feet): Perpendicular to and approximately 80 feet from the power line.

Log of Interference:

Date: May 9, 2004

Time: 8 PM to 9 PM

The interference consists of a series of modulated tones across the entire 15-meter band

Frequency: 21.0 to 21.450 MHZ

Interfering Signal Strength S-7

Daniel Hinz - BPL Interference Levels 6-4-04

From: "Jim Spencer" <jlscr@mchsi.com>
To: "Daniel Hinz" <danielhinz@alliantenergy.com>, "Jerry Koppenhaver" <JerryKoppenhaver@alliantenergy.com>, "Tim VanWeelden" <timvanweelden@alliantenergy.com>
Date: 06/04/2004 3:04 PM
Subject: BPL Interference Levels 6-4-04
CC: "Wade Walstrom" <Walstrom@mchsi.com>, "Dave Sumner" <dsumner@arrl.org>, "Ed Hare W1RFI" <W1RFI@arrl.org>

Gentlemen,
As a follow-up to my telephone conversation with Dan this morning, I have completed a scan for BPL interference at my home. Dan told me that they had not changed the notching configuration since last Friday and that everything was the same as when I last reported on June 1. I told him that there were significant differences at my house and that it had been changed or something had failed.

Compare this data with that sent on June 1 and it clear that the interference has been moved out of all the amateur bands above 30 meters.

This afternoon between 1:20 and 2:15 PM I checked all amateur bands from 160 meters to 10 meters.

My band by band observations:

160 meters (1.8 to 2.0 MHz): No BPL observed in S9 + 20 db power-line noise.

80 meters (3.5 to 4.0 MHz): No BPL observed in S9 + 5 db power-line noise.

40 meters (7.0 to 7.3 MHz): BPL signals over the entire band, S8 to S9. Power-line noise S8.

30 meters (10.1 to 10.150 MHz): BPL signals over the entire band, S8. Power-line noise S7.

20 meters (14.0 to 14.350 MHz): No BPL signals. Power-line noise S8.

17 meters (18.068 to 18.168 MHz): No BPL signals. Power-line noise S4.

15 meters (21.0 to 21.45 MHz): No BPL signals. Power-line noise S1.

12 meters (24.89 to 24.99 MHz): No BPL signals. Power-line noise S0.

10 meters (28.0 to 29.7 MHz): No BPL signals. S0 power-line noise.